

Applicant:	Maquaire	Docket No:	TI-30144
Serial No:	09/779,210	Examiner:	Tran, Tuan A
Filed:	2/8/2001	Art Unit:	2682
For:	AUDIBLE CALLER IDENTIFICATION FOR MOBILE COMMUNICATION		
DEVICE			

Assistant Commissioner for Patents
Washington, DC 20231

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REAL PARTY IN INTEREST

RELATED APPEALS AND INTERFERENCES

PAGE 4/15 * RCVD AT 11/14/2005 3:11:49 PM [Eastern Standard Time] * SVR:USPTO-EFXRF-6/40 * DNIS:2738300 * CSID:972 917 4417 * DURATION (mm-ss):04-06

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STATUS OF THE CLAIMS

Claims 1-15 were originally filed and Claim 15 was cancelled in the 12/16/2004 amendment. Consequently, the subject matter of the instant appeal is the rejection of Claims 1-14.

STATUS OF AMENDMENTS

The application was originally filed with Claims 1-15. A response after final rejection was filed on August 2, 2005 amending no claims.

The Advisory Action did not indicate that the Response had been entered but did indicate that it had been considered.

Consequently, Applicants presume that it has been entered.

SUMMARY OF THE CLAIMED SUBJECT MATTER

Figure 1 illustrates a mobile communication device for providing wireless communications. The mobile communication device 10 of Figure 1 could be, for example, a cellular phone, smart phone, satellite phone, portable computer or a PDA (personal digital assistant) with wireless communications capabilities. The overall look of the device 10 could vary according to its capabilities; however, most mobile communication devices will have similar attributes: a display 12, an input keypad 14 (which may be integrated with the display 12 using a touch screen), a microphone 16, a conversation speaker 18 (for audio when pressed to the user's ear), a loudspeaker/ringer 20, and an antenna 22.

In operation, the mobile communications device 10 has both voice activated dialing capabilities and audible caller identification capabilities. For the voice activated

dialing, the internal circuitry of the mobile communications device 10 stores information used for voice activated dialing in a memory subsystem (see Figure 2). The information stored by the mobile communications device 10 includes a telephone number database (storing a plurality of frequently called numbers), a voice template database (storing voice templates used to recognize an utterance by the user indicative of a particular telephone number), and an audio file database (for confirmation of a voice dialed number), typically in the users own voice).

When a user creates a new entry for the voice activated dialing system, he or she speaks the designation for the new number (such as "John", "work", or "home") and enters the number, either by speaker independent voice recognition, or by using the telephone keypad. The spoken designation is stored as an audio file (such as a *.wav file) and a template is made from the audio file; this template is used later for speech recognition. For each voice activated dialing entry, the telephone number, template and audio file are linked.

The user may call any entry on the voice dialing list by speaking "Call" (or another suitable command) and the designation. Accordingly, "call home" would result in the telephone number associated with "home" being dialed. To identify the desired telephone number, the voice dialing circuitry parses the utterance (i.e., separates "call" and "home") and compares the stored templates with the designation portion of the utterance (i.e., "home"). Using techniques well known in the art, the designation portion of the utterance is matched to one of the templates, typically by assigning a score to each comparison. If the comparison with the best score meets a certain threshold, a match occurs, and the phone number and audio file associated with the matching template are retrieved. Prior to dialing, however, the audio file associated with the matching template is played to the user as a confirmation. Thus, if the user voice dials using "call John" and the mobile communications device 10 responds with "calling Jean" (where "Jean" is the audio file associated with the errantly matched template), the user can cancel the phone call before the connection is made. The voice dialing database could be used for other commands as well, such as "page John", depending upon the capabilities of the mobile communications device 10.

The present invention uses the same audio files created for voice activated dialing for caller identification. On an incoming call, the mobile communications device 10 receives data indicating the originating telephone number. This information is compared to the telephone numbers stored in the voice activated dialing database. If there is a match, the audio file associated with that number is retrieved and played. Accordingly, the user receives an audible indication of the calling party prior to answering the phone.

Figure 2 illustrates a basic block diagram showing the circuitry used in the voice activated dialing and the audible caller identification functions. Processing circuitry (typically, a digital signal processor, generally referred to as a "DSP" or a multiple microprocessor/DSP system) 30 is coupled to a transceiver 32, memory subsystem 38, keypad 14, microphone 16, and audio output circuitry 36. Output circuitry 36 is coupled to speaker 20. Antenna 22 is coupled to transceiver 32. Memory subsystem 38 includes locations for telephone numbers 40, templates 42, audio files 44 and programs 46. It should be noted that other data would also be stored in memory subsystem 38.

Memory subsystem 38 may include memory internal to processing circuitry 30, external to processing circuitry 30, or a combination of internal and external memory. Processing circuitry 30 may receive data and commands through keypad 14, microphone 16 (using speaker dependent and/or speaker independent voice recognition), and from telecommunications signals via transceiver 32.

During operation of the mobile communications device 10, the processing circuitry will execute a number of tasks. For example, the processing circuitry will be monitoring inputs from the keypad 14, microphone 16 and transceiver 32. If, for example, a number is dialed using the keypad, the processing circuitry will accumulate numbers from the keypad 14, and initiate a connection via one or more base stations. Similarly, a voice input via the microphone would be monitored via a speech recognition task to determine whether a command, such as "call", was being issued. If so, the designated party would be determined using speech recognition, and the telephone

number would be retrieved from memory subsystem 38 using a voice activated dialing task.

Processing circuitry 30 also monitors transceiver 32 for incoming calls directed to the mobile communications device 10. When such a call is received, the originating number is received using typical caller identification techniques. The originating number is compared to numbers in the telephone number database 40. If there is a match, the associated audio file is played through speaker 20 and the information is presented on display 12.

Figure 3 illustrates a block diagram showing the interaction between the voice activated dialing task 50 and the audible caller identification task 52. Both the voice activated dialing task 50 and the caller identification task 52 access the audio files database 44 and the telephone numbers database 40.

Figure 4 illustrates a block diagram of the audible caller identification task 52. In block 60, the task 52 waits for an incoming call directed to the mobile communications device 10. When an incoming call is received, the originating number is derived from the data stream in block 62. The originating number is compared to numbers in the telephone number database 40 used for voice activated dialing. If there is a match in decision block 64, the audio file associated with the matching telephone number is accessed from the audio file database 44. This audio file is played to the user in block 68, if the feature is enabled (in many circumstances, the user will not want the name to be audibly output, so the feature may be disabled by the user). In block 70, the name and number are visually displayed to the user.

In addition to playing the audio file from the audio file database, the processing circuitry 30 may also play an accompanying audio file, such as "you have a call from" or "is calling". Accordingly, the complete audio output from the caller identification task could be "you have a call from home" or "john is calling." The accompanying recording could be synthesized speech or recorded by the user.

If, in decision block 64, the originating number is not found in the telephone database 40, then the name and number is output on the display 12 without playing the audio file. Additionally, or in the alternative, a distinctive ring could be played, where the distinctive ring indicates a group of one or more telephone number associated with the calling party.

The present invention provides significant advantages over the prior art. First, it allows for an audible indication of the calling party for the most frequently used numbers. Second, the capability for audible indication, in the user's own voice, can be accomplished without additional memory, since the audio files are shared with the voice activated dialing function. Accordingly, the additional power and cost associated with the audible caller identification function is minimal.

GROUND OF REJECTION

The two issues on appeal are first whether Claims 1, 4-10, 13, and 14 are properly rejected under 35 U.S.C. § 103 as allegedly being unpatentable over Van Der Salm in view of Barkat; and secondly whether Claims 2, 3, 11, and 12 were properly rejected under 35 U.S.C. § 103 as being allegedly unpatentable over Van Der Salm in view of Barkat and further in view of Flannery.

ARGUMENTS

It is respectfully submitted that Van Der Salm does not disclose or suggest the presently claimed invention including the call identification circuitry for detecting and originating telephone number associated with an incoming telephone call and if the originating telephone number is associated with an audio file, playing the associated audio file corresponding the match between the audio input from the user and one of the templates as defined in independent Claim 1, albeit defined as the method step of detecting the original telephone number associated with an incoming telephone call and if the originating telephone number is associated with the audio file, playing the associated

audio file corresponding to the match between the audio input from the user and one of the templates as defined in the independent Claim 10.

Applicants agree with the Examiner that Van Der Salm does not disclose or suggest the presently claimed invention including the voice activated dialing circuitry and the caller identification circuitry for playing the associated audio sound in response to the match.

It is respectfully submitted that Barkat does not disclose or suggest the presently claimed invention including the caller identification circuitry for detecting the originating telephone number associated with the incoming telephone call and if the originating telephone number is associated with the audio file, playing the associated audio file corresponding the match between the audio input from the user and one of the templates as defined in the various forms in independent Claims 1 and 10.

Barkat discloses at column 4, lines 20-25, the codec 50 also converts the pre-defined vocal messages and any other voice output to an analog format which is then provided to the microphone 20.

Barkat has noting to do with incoming calls and consequently could not disclose or suggest the above mentioned claim language.


Whether or not Flannery discloses a portable phone which displays the originating telephone number and whether or not one of ordinary skill in the art would consider modifying either Van Der Salm or Barkat is of no moment since the resulting construction would still in no way disclose or suggest the presently claimed invention.

CONCLUSION

For the foregoing reasons, Appellants respectfully submit that the Examiner's final rejection of Claims 1-15 under 35 U.S.C. § 103 is not properly founded in law, and it is respectfully requested that the Board of Patent Appeals and Interferences so find and reverse the Examiner's rejections.

To the extent necessary, the Appellants petition for an Extension of Time under 37 CFR 1.136. Please charge any fees in connection with the filing of this paper, including extension of time fees, to the deposit account of Texas Instruments Incorporated, Account No. 20-0668.

Respectfully submitted,



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APPENDIX

Claim 1 (previously presented): A mobile communications device comprising:
a database of telephone numbers, one or more of the telephone numbers
associated with respective audio files and voice templates;
voice activated dialing circuitry for dialing one of the telephone numbers in
response to identifying a match between an audio input from a user and one of
templates, and for playing the associated audio file in response to said match; and;
caller identification circuitry for detecting an originating telephone number
associated with an incoming telephone call and, if said originating telephone number is
associated with an audio file, playing the associated audio file corresponding to said
match between audio input from said user and said one of said templates.

Claim 2 (original): The mobile communications device of claim 1 and further
comprising a display for displaying name associated with a telephone caller.

Claim 3 (original): The mobile communications device of claim 2 wherein the
display further displays said originating telephone number.

Claim 4 (original): The mobile communications device of claim 1 wherein said
caller identification circuitry further plays a distinctive ring associated with said
originating telephone number if the originating telephone number is not associated with
an audio file.

Claim 5 (original): The mobile communications device of claim 1 wherein said
audio files are recordings of the user's voice.

Claim 6 (original): The mobile communications device of claim 1 wherein said
mobile communications device is a cellular telephone.

Claim 7 (original): The mobile communications device of claim 1 wherein said mobile communications device is a smart phone.

Claim 8 (original): The mobile communications device of claim 1 wherein said mobile communications device is a personal digital assistant.

Claim 9 (original): The mobile communications device of claim 1 wherein said mobile communications device is a portable computer.

Claim 10 (previously presented): A method of interfacing with a mobile communications device, comprising the steps of:

storing frequently called numbers in a telephone number database, one or more of the telephone numbers in said telephone number database associated with respective audio files and voice templates;

receiving an audio input from a user for dialing one of said frequently dialed telephone numbers;

in response to receiving said audio input, identifying a match between said audio input and one of templates and playing the associated audio file in response to said match; and;

detecting an originating telephone number associated with an incoming telephone call and, if said originating telephone number is associated with an audio file, playing the associated audio file corresponding to said match between audio input from said user and said one of said templates.

Claim 11 (original): The method of claim 10 and further comprising the step of displaying name associated with a telephone caller.

Claim 12 (original): The method of claim 11 and further comprising the step of displaying said originating telephone number.

Claim 13 (original): The method of claim 10 and further comprising the step of playing a distinctive ring associated with said originating telephone number if the originating telephone number is not associated with an audio file.

Claim 14 (original): The method of claim 10 wherein said audio files are recordings of the user's voice.

Claim 15 (cancelled)

EVIDENCE APPENDIX

Appellants are submitting no items of evidence.

RELATED PROCEEDINGS APPENDIX

Appellants have no submission for the Related Proceeding Appendix.